

ATTITUDE OF INDIAN COMMERCIAL BANKS' CUSTOMERS TOWARDS ARTIFICIAL INTELLIGENCE: WITH PARTICULAR REFERENCE TO COIMBATORE CITY

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ABSTRACTS

This study explores how customers perceive the implementation of Artificial Intelligence (AI) at the Indian Commercial Banks. As AI technologies increasingly integrate into banking services, understanding customer attitudes becomes essential for enhancing user experience and satisfaction. Many customers are aware of AI-driven services offered by banks, such as chatbots, personalized recommendations, and automated customer support. Customers generally view AI positively, citing benefits such as improved efficiency, faster service delivery, and 24/7 availability of banking services. Despite the positive perceptions, some customers express concerns regarding data privacy, security, and the potential for reduced human interaction. For analysis the researcher has used convenience sampling technique with 100 samplings. Finally studies conclude with many customers' held a neutral to positive attitude regarding the application of artificial intelligence in the banking industry.

Keywords: Artificial Intelligence, Commercial banks, Attitude and Efficiency.

INTRODUCTION

The roles of customers and their commitment to their jobs have become serious concerns for the banking industry, especially in an environment marked by intense competition and numerous challenges. Ultimately, the effectiveness of banks hinges on the level of employee engagement. Artificial intelligence (AI) is poised to disrupt various sectors globally, including banking. The emergence of intelligent machines with advanced cognitive abilities such as reasoning, perception, learning, problem-solving, and decision-making alongside advancements in data collection, analytics, and computing power, creates opportunities to enhance human intelligence and fundamentally change how we live and work. The integration of AI into banking represents a crucial area of exploration, with forecasts indicating that it will significantly influence the financial sector.

As the industry undergoes successive waves of innovation—from mainframes and databases to big data, IoT, and now AI—it finds itself at a critical juncture. AI-driven recruitment methods, such as resume screening, candidate matching, video interviews, chatbots, predictive analytics, virtual reality assessments, and social media analysis, promise to boost productivity, reduce costs, and improve the quality of hires. However, the application of AI in hiring raises important ethical and legal issues, particularly concerning the potential for algorithmic bias and discrimination. A survey conducted by Accenture shows that four out of five bankers believe AI will substantially transform banking practices. As businesses increasingly rely on information technology to optimize revenues, research indicates that AI will enhance customer experiences in banking, making a robust digital strategy essential for institutions aiming for sustainable growth and competitiveness in the era of Industry 4.0. The rapid growth of AI research and development is fueled by its significant advantages for both banks and customers, particularly regarding productivity and innovation. Notable progress has been made in traditionally challenging domains like computer vision, natural language processing, and audio analysis. The trend in technology development is shifting towards larger, more sophisticated AI models that can address complex problems with improved performance and reliability. As a result, the banking and financial sectors are increasingly dependent on AI to provide reliable and cost-effective services, with the AI market in banking projected to expand from \$3.88 billion in 2020 to \$64.03 billion by 2030, reflecting a compound annual growth rate (CAGR) of 32.6%.¹

LITERATURE REVIEW

Axis Bank, ICICI Bank, and HDFC Bank are pushing the limits of technology while using robotics to concentrate operations and for quicker turnarounds in things like loan processing and the sale of financial goods to customers.

Dr.M.Anbukarasi, Darshan.S & Sony.P.J (2022) aimed to measure the performance of before and after merged banks. Banks were selected which were merged with the other banks in the due course of time. Camel model has adopted for find the performance of those bank pre-merger and post-merger.

Guangming Cao & Yanqing Duan et al. (2021) research adds both conceptual and empirical insights to the growing body of literature on the use of AI in organizational decision-making. It underscores the practical implications of implementing AI, emphasizing the need to create supportive conditions, establish effective mechanisms to address managers' concerns, and maintain a balanced view of both the advantages and potential downsides of AI utilization.

Dwi Suhartanto, Moch Edman Syarief et al. (2021) aims to explore the factors influencing millennial loyalty to AI-enabled mobile banking services in Islamic banks. The findings indicate that service quality, attitudes toward AI, and trust are crucial determinants of this loyalty. Additionally, the research highlights the significant impact of religiosity on millennials' loyalty to mobile banking services.

¹ <https://www.alliedmarketresearch.com/ai-in-banking-market-A11871#:~:text=The%20global%20AI%20in%20banking,competition%20posed%20by%20FinTech%20players.>

To enhance loyalty towards AI-enabled mobile banking, Islamic banks are encouraged to focus on building trust and positive attitudes among millennials. Furthermore, it is strongly recommended that these banks ensure their operations comply with Islamic law to foster greater loyalty among this demographic.

Ayobami F. Elegunde & Reuben O. Osagie (2020) found that artificial intelligence enhances work processes in banks across Nigeria, making operations more efficient through machine-assisted tasks. It recommends that not only banks but also other service industry firms adopt AI. Furthermore, it emphasizes the importance of educating all employees and the general public about the benefits of embracing AI. The study also advocates for updating school curricula at all levels in developing and third-world economies to include AI and its associated technologies.

Stephan Schlogl, Claudia Postulka et al., (2019) relevant discussions around the topic is often rather controversial, where the companies see in smart applications great innovation, and employees are increasingly skeptical and scared. The study concluded with Companies are still at the very starting point when it comes to the implementation of AI tools and tech and miss information on potential use cases as well as the relevant expertise. The currently solutions are mainly used to optimize processes and sometimes to support CRM activities. There is a dominance of in-house solutions caused by data privacy and security issues (cf. GDPR). In addition to technical challenges, there are significant organizational obstacles to overcome, mainly rooted in a lack of employee acceptance.

RESEARCH GAP

Earlier research has examined the impact of artificial intelligence in the banking sector, investigating its applications, benefits, and potential job risks, including the reduction of positions due to AI implementation. However, there is still a need for further research to assess the attitudes of banking customers toward the integration of AI technologies.

OBJECTIVE

 To measure the attitude of selected Commercial banks customers towards Artificial Intelligence.

HYPOTHESIS

H₀: There is no positive attitude of banks customers towards AI.

H₀: There is no significance difference in the attitude of commercial banks' customers.

SCOPE OF THE STUDY

This study examines the factors influencing the bank customers' attitude towards the implementation of Artificial Intelligence in Coimbatore City.

METHODOLOGY OF THE STUDY

This study utilized primary data gathered through a questionnaire employing a Likert scale that ranges from strongly disagrees to strongly agree. The questionnaire is divided into two sections: the first includes demographic questions, while the second assesses bank customers' awareness of artificial intelligence. A total of 100 customers from selected private sector banks in Coimbatore City were surveyed, drawn from an estimated population of 1,000 bank customers in the area. The sample size was calculated using a sample size calculator, with a confidence level of 95% and a margin of error of 5%. A structured, closed-ended questionnaire was used for data collection, and quantitative data analysis was conducted using SPSS software. To evaluate customer attitudes by age and gender, the researcher applied a convenience sampling technique.

CONCEPTUAL MODEL

The conceptual model of this study encompasses the attitudes of customer's, banks, and artificial intelligence.



RESEARCH ANALYSIS

The analysis is based on 100 respondents, predominantly aged between 25 and 30, who are significantly influenced by artificial intelligence in the banking industry. The customers point of view on artificial intelligence as a remarkable innovation with substantial potential across in various sectors. Quantitative data analysis was conducted using SPSS software, and the findings are presented in the tables below.

Table 1: Descriptive Statistics

	Mean	SD	N
AI banking ensures ease and security	1.58	.768	100
AI banking guarantees accuracy and utility.	2.27	.973	100
AI reduces the need for manpower in routine tasks.	1.87	.960	100
AI applications offer user-friendly interfaces.	3.26	.960	100
Payments are simple and seamless.	1.59	.767	100
Transactions can be made anytime without any hassle	1.50	.893	100
AI replaces telecallers for routine consumer interactions.	2.48	.847	100
If there was nobody around to tell me what to do when I went	1.72	.944	100
If I just had a built-in assistance facility	2.88	.795	100
The use of AI in banking encourages me to engage with it.	2.25	.796	100
The AI-enabled digital banking exceeded my expectations in terms of service quality.	3.10	.798	100
My expectations regarding AI-enabled digital banking have been met.	3.29	.808	100

Sources: Computed and Calculated from the Primary Data

Table 2: Descriptive Statistics

	Mean	Std. Deviation
Age	1.87	.562
Attitude	2.3158	.49751

Sources: Computed and Calculated from the Primary Data

This descriptive analysis of the data reveals that, on average, customers in the dataset are between 15 and 45 years old and generally exhibit a positive attitude toward the measured variables.

Table 3: Correlation between Age and other attitude factors

Construct	Pearson Correlation
AI banking ensures ease and security.	0.151
AI banking guarantees accuracy and utility.	0.261
AI reduces the need for manpower in routine tasks.	0.270
AI applications offer user-friendly interfaces.	0.110
Payments are simple and seamless.	0.108
Transactions can be made anytime without any hassle	0.460
AI replaces telecallers for routine consumer interactions.	0.281
if there was nobody around to tell me what to do when I went	0.473
If I just had a built-in assistance facility	0.074
Artificial intelligence enabled banking motivate me to use it.	0.171
The AI enabled digital banking had better service level than my expectation.	0.205
My expectations towards AI enabled digital banking are confirmed.	0.433

Sources: Computed and Calculated from the Primary Data (SPSS Output)

Correlation is significant at the 0.05 level (1-tailed). Correlation is significant at the 0.01 level (1-tailed)

Table 4: Regression Analysis Model Summary

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. Change	
1	.683 ^a	.467	.461	.297	.467	85.749	1	98	.000	2.300
a. Predictors: (Constant), Age										
b. Dependent Variable: Attitude										

Source: Compiled and Calculated from Primary Data

The above Table displays the model summary of impact of selected banks among commercial bank customers in attitude. When the customers' age is dependent variable, R is 0.683 which means that there is strong impact. R-Square is .467 which indicates 46.7% of impact is accounted. It shows the age (independent variable) influenced the attitude of selected commercial bank customers (dependent variable). The adjusted R-squared value is 0.461, indicating that the model explains 46% of the variance in the dependent or criterion variable. Additionally, the Durbin-Watson statistic is 2.300, suggesting that the model does not experience auto-correlation.

H₀: There is no significance difference in the attitude of commercial banks customers'.

Table 5: Regression Analysis ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.544	1	7.544	85.749	.000 ^b
	Residual	8.621	98	.088		
	Total	16.165	99			
a. Dependent Variable: Attitude						
b. Predictors: (Constant), Age						

Source: Compiled and Calculated from Primary Data

The table presents the ANOVA results for the attitudes of commercial bank customers. The ANOVA table indicates a significant value of 0.000, which is below the 0.05 level of significance. Therefore, we can conclude that AI technology significantly varies by age and that the selected variables are influencing attitudes toward AI technology. Consequently, the null hypothesis is rejected at the 5% level of significance.

Table 6: Regression Analysis Coefficient

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.791	.075		23.810	.000		
		.279	.030	.683	9.260	.000	1.000	1.000
a. Dependent Variable: Attitude								

Source: Compiled and Calculated from Primary Data

The above Table shows the coefficient for impact of commercial bank customers'. It implies that age is significant at 5% level. The beta value shows that positive relationship with AI technology and attitude of commercial bank customers. The Multi-Collinearity analysis is appropriate for this study, as the Variance Inflation Factor (VIF) values are below 5. This indicates that the bank customer data collected during this study period does not exhibit any Multi-Collinearity issues. Therefore, the null hypothesis is rejected.

FINDINGS

This research aimed to assess bank customers' attitudes toward artificial intelligence in selected commercial banks. The findings revealed that most respondents were male, with a majority under the age of 25. Most customers reported having 0 to 10 years of experience at their banks, followed by those with 10 to 15 years or more. Correlation analysis indicated that many customers had a neutral to positive attitude toward the use of artificial intelligence in banking. The data table shows a significant relationship between age and other factors influencing customer attitudes, with the 26 to 35 age group viewing artificial intelligence as more applicable to the workplace and exhibiting a more positive attitude toward it. In contrast, attitudes appeared to become less favorable as age increased. A negative correlation is observed between artificial intelligence and employee attitudes, with middle-aged workers (aged 36 and above) viewing AI as less effective in enhancing workplace productivity. Followed by, the regression analysis shows influences of commercial banks customers. Here, the findings suggest that while customers at the Commercial Banks in Coimbatore City largely have a positive attitude toward artificial intelligence, addressing concerns related to privacy and human interaction will be crucial for further acceptance and integration of AI technologies in banking services. Continuous education and engagement with customers about the benefits and safeguards of AI can help foster a more favorable attitude and enhance overall customer experience.

CONCLUSION

Artificial Intelligence (AI) is becoming increasingly vital in banking and financial services, automating complex and time-consuming manual tasks. Its importance in the industry is growing, providing banks with new opportunities to improve efficiency, enhance customer experience, and manage risk. Our analysis shows a direct positive relationship between AI and bank customers, while an inverse relationship is noted among older customers. Various factors influence bank customers' attitudes toward AI, including their perceptions of its impact on commercial banking. As AI continues to develop and integrate into the banking sector, it is essential for the industry to adopt advanced technologies and offer training to help customers understand AI's capabilities and potential effects. Attitudes toward AI differ across demographic groups, with younger customers generally more open to AI innovations than older customers, who may approach them with caution. Customers in Coimbatore City who have interacted with AI services at commercial banks tend to have a positive attitude, especially when AI effectively resolves their queries and concerns.

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